

SEQUENCE LISTING

<110> Hu, Jin-Shan
Craig, Rosen
Cao, Liang

<120> Vascular Endothelial Growth Factor-2

<130> PF112P3D1C1

<140> 09/935,726

<141> 2001-08-24

<150> 09/438,538

<151> 1999-11-12

<160> 35

<170> PatentIn version 3.0

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Leu Ala Ala Ala Leu Leu Pro Gly Pro Arg Glu Ala Pro Ala Ala Ala
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gcc gcc ttc gag tcc gga ctc gac ctc tcg gac gcg gag ccc gac gcg 146
Ala Ala Phe Glu Ser Gly Leu Asp Leu Ser Asp Ala Glu Pro Asp Ala
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ggc gag gcc acg gct tat gca agc aaa gat ctg gag gag cag tta cgg 194
Gly Glu Ala Thr Ala Tyr Ala Ser Lys Asp Leu Glu Glu Gln Leu Arg
25 30 35

tct gtg tcc agt gta gat gaa ctc atg act gta ctc tac cca gaa tat 242
Ser Val Ser Ser Val Asp Glu Leu Met Thr Val Leu Tyr Pro Glu Tyr
40 45 50

tgg aaa atg tac aag tgt cag cta agg aaa gga gcc tgg caa cat aac 290
Trp Lys Met Tyr Lys Cys Gln Leu Arg Lys Gly Gly Trp Gln His Asn
55 60 65 70

aga gaa cag gcc aac ctc aac tca agg aca gaa gag act ata aaa ttt 338



2002-01-02 14:00:00

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85

gct gca gca cat tat aat aca gag atc ttg aaa agt att gat aat gag
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90

95

100

386

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Trp Arg Lys Thr Gln Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly

105

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434

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130

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140

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530

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155

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165

578

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Val Pro Leu Ser Gln Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn

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175

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626

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190

195

674

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200

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770

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235

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245

818

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255

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866

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270

275

914

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962

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310

1010

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315

320

325

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aat aca gag atc ttg aaa agt att gat aat gag tgg aga aag act caa      253
Asn Thr Glu Ile Leu Lys Ser Ile Asp Asn Glu Trp Arg Lys Thr Gln
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Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly Lys Glu Phe Gly Val
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gcg aca aac acc ttc ttt aaa cct cca tgt gtg tcc gtc tac aga tgt      349
Ala Thr Asn Thr Phe Phe Lys Pro Pro Cys Val Ser Val Tyr Arg Cys
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Gly Gly Cys Cys Asn Ser Glu Gly Leu Gln Cys Met Asn Thr Ser Thr
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agc tac ctc agc aag acg tta ttt gaa att aca gtg cct ctc tct caa      445
Ser Tyr Leu Ser Lys Thr Leu Phe Glu Ile Thr Val Pro Leu Ser Gln
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ggc ccc aaa cca gta aca atc agt ttt gcc aat cac act tcc tgc cga      493
Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn His Thr Ser Cys Arg
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Cys Met Ser Lys Leu Asp Val Tyr Arg Gln Val His Ser Ile Ile Arg
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cgt tcc ctg cca gca aca cta cca cag tgt cag gca gcg aac aag acc      589
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tgc ccc acc aat tac atg tgg aat aat cac atc tgc aga tgc ctg gct      637
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Leu	Lys	Gly	Lys	Lys	Phe	His	His	Gln	Thr	Cys	Ser	Cys	Tyr	Arg	Arg		
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Pro	Cys	Thr	Asn	Arg	Gln	Lys	Ala	Cys	Glu	Pro	Gly	Phe	Ser	Tyr	Ser		
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Glu	Glu	Val	Cys	Arg	Cys	Val	Pro	Ser	Tyr	Trp	Gln	Arg	Pro	Gln	Met		
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 Thr Phe Phe Lys Pro Pro Cys Val Ser Val Tyr Arg Cys Gly Gly Cys
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 Pro Ala Thr Leu Pro Gln Cys Gln Ala Ala Asn Lys Thr Cys Pro Thr
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 Asn Tyr Met Trp Asn Asn His Ile Cys Arg Cys Leu Ala Gln Glu Asp
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 Phe Met Phe Ser Ser Asp Ala Gly Asp Asp Ser Thr Asp Gly Phe His
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 Asp Ile Cys Gly Pro Asn Lys Glu Leu Asp Glu Glu Thr Cys Gln Cys
 185 190 195 200
 Val Cys Arg Ala Gly Leu Arg Pro Ala Ser Cys Gly Pro His Lys Glu
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 Val Cys Lys Arg Thr Cys Pro Arg Asn Gln Pro Leu Asn Pro Gly Lys
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 Cys Ala Cys Glu Cys Thr Glu Ser Pro Gln Lys Cys Leu Leu Lys Gly
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 Lys Thr Arg Thr Val Ile Tyr Glu Ile Pro Arg Ser Gln Val Asp Pro
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 Val His His Arg Ser Val Lys Val Ala Lys Val Glu Tyr Val Arg Lys
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 His Gly Asp Pro Gly Glu Glu Asp Gly Ala Glu Leu Asp Leu Asn Met
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Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys
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 His Leu Phe Val Gln Asp Pro Gln Thr Cys Lys Cys Ser Cys Lys Asn
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ttggccgatt	cattaatgca	gctggcacga	caggtttccc	gactggaaag	cgggcagtgga	2340
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ccactcctgc	agttcggggg	catggatcgc	cggatagccg	ctgctgggtt	cctggatgcc	2460
gacggatttg	cactgcgcgt	agaactccgc	gaggtcgtcc	agcctcaggc	agcagctgaa	2520
ccaactcgcg	aggggatcga	gccccgggtg	ggcgagaagc	tccagcatga	gatccccgcg	2580
ctggaggatc	atccagccgg	cgtccccgaa	aacgattccg	aagcccaacc	tttcatagaa	2640

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ggcgccgggtg gaatcgaaat ctctgtgatgg cagggtgggc gtcgcttggc cggtcatttc 2700
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gaatcgggag cgccgatacc gtaaagcacg aggaagcggc cagcccatc gccgccaagc 2820
tcttcagcaa tatcacgggt agccaacgct atgtctctgat agcgggtccgc cacaccagc 2880
cggccacagt cgatgaatcc agaaaagcgg ccattttcca ccatgatatt cggcaagcag 2940
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gccagccacg atagccgcgc tgccctgtcc tgcagttcat tcagggcacc ggacaggctg 3360
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cggataacaa ttaagatgta cccaattgtg agcggataac aatttcacac attaaaggag 3960
agaaattaca tatg 3974

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<210> 17
<211> 112
<212> DNA
<213> Artificial sequence

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<220>
<221> promoter
<222> (1)..(112)
<223> pHE4a promoter

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<400> 17
aagcttaaaa aactgcaaaa aatagtgtga cttgtgagcg gataacaatt aagatgtacc 60
caattgtgag cggataacaa ttccacacat taaagaggag aaattacata tg 112

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<210> 18
 <211> 419
 <212> PRT
 <213> Homo sapiens

<400> 18

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Met His Ser Leu Gly Phe Phe Ser Val Ala Cys Ser Leu Leu Ala Ala
1      5      10      15

Ala Leu Leu Pro Gly Pro Arg Glu Ala Pro Ala Ala Ala Ala Phe
20      25      30

Glu Ser Gly Leu Asp Leu Ser Asp Ala Glu Pro Asp Ala Gly Glu Ala
35      40      45

Thr Ala Tyr Ala Ser Lys Asp Leu Glu Glu Gln Leu Arg Ser Val Ser
50      55      60

Ser Val Asp Glu Leu Met Thr Val Leu Tyr Pro Glu Tyr Trp Lys Met
65      70      75      80

Tyr Lys Cys Gln Leu Arg Lys Gly Gly Trp Gln His Asn Arg Glu Gln
85      90      95

Ala Asn Leu Asn Ser Arg Thr Glu Glu Thr Ile Lys Phe Ala Ala Ala
100     105     110

His Tyr Asn Thr Glu Ile Leu Lys Ser Ile Asp Asn Glu Trp Arg Lys
115     120     125

Thr Gln Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly Lys Glu Phe
130     135     140

Gly Val Ala Thr Asn Thr Phe Phe Lys Pro Pro Cys Val Ser Val Tyr
145     150     155     160

Arg Cys Gly Gly Cys Cys Asn Ser Glu Gly Leu Gln Cys Met Asn Thr
165     170     175

Ser Thr Ser Tyr Leu Ser Lys Thr Leu Phe Glu Ile Thr Val Pro Leu
180     185     190

Ser Gln Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn His Thr Ser
195     200     205

Cys Arg Cys Met Ser Lys Leu Asp Val Tyr Arg Gln Val His Ser Ile
210     215     220

Ile Arg Arg Ser Leu Pro Ala Thr Leu Pro Gln Cys Gln Ala Ala Asn
225     230     235     240

Lys Thr Cys Pro Thr Asn Tyr Met Trp Asn Asn His Ile Cys Arg Cys
245     250     255

Leu Ala Gln Glu Asp Phe Met Phe Ser Ser Asp Ala Gly Asp Asp Ser
260     265     270

Thr Asp Gly Phe His Asp Ile Cys Gly Pro Asn Lys Glu Leu Asp Glu
275     280     285

Glu Thr Cys Gln Cys Val Cys Arg Ala Gly Leu Arg Pro Ala Ser Cys
290     295     300

Gly Pro His Lys Glu Leu Asp Arg Asn Ser Cys Gln Cys Val Cys Lys

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305		310		315		320
Asn Lys Leu Phe	Pro Ser Gln Cys Gly Ala	Asn Arg Glu Phe Asp Glu				
	325	330			335	
Asn Thr Cys Gln Cys Val Cys Lys Arg Thr Cys Pro Arg Asn Gln Pro						
	340	345			350	
Leu Asn Pro Gly Lys Cys Ala Cys Glu Cys Thr Glu Ser Pro Gln Lys						
	355	360			365	
Cys Leu Leu Lys Gly Lys Lys Phe His His Gln Thr Cys Ser Cys Tyr						
	370	375			380	
Arg Arg Pro Cys Thr Asn Arg Gln Lys Ala Cys Glu Pro Gly Phe Ser						
	385	390			395	400
Tyr Ser Glu Glu Val Cys Arg Cys Val Pro Ser Tyr Trp Gln Arg Pro						
	405	410			415	

Gln Met Ser

<210> 19
 <211> 30
 <212> DNA
 <213> Artificial sequence

<220>
 <221> primer_bind
 <222> (1)..(30)
 <223> 5' PCR primer

<400> 19
 gcagcacata tgacagaaga gactataaaa

30

<210> 20
 <211> 30
 <212> DNA
 <213> Artificial sequence

<220>
 <221> primer_bind
 <222> (1)..(30)
 <223> 3' PCR primer

<400> 20
 gcagcaggta cctcacagtt tagacatgca

30

<210> 21
 <211> 30
 <212> DNA
 <213> Artificial sequence

<220>
 <221> primer_bind
 <222> (1)..(30)
 <223> 3' PCR primer

<400> 21
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<210> 22
 <211> 30
 <212> DNA
 <213> Artificial sequence

<220>
 <221> primer_bind
 <222> (1)..(30)
 <223> 5' PCR primer

<400> 22
 gcagcaggat cccacagaag agactataaa

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<210> 23
 <211> 30
 <212> DNA
 <213> Artificial sequence

<220>
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 <223> 3' PCR primer

<400> 23
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30

<210> 24
 <211> 39
 <212> DNA
 <213> Artificial sequence

<220>
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 <222> (1)..(39)
 <223> 5' PCR primer

<400> 24
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39

<210> 25
 <211> 36
 <212> DNA
 <213> Artificial sequence

<220>
 <221> primer_bind
 <222> (1)..(36)
 <223> 5' PCR primer

<400> 25
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36

<210> 26
 <211> 55
 <212> DNA
 <213> Artificial sequence

<220>
 <221> primer_bind

<222> (1)..(55)
 <223> 5' PCR primer

 <400> 26
 gatgatcca tcatgcactc gctgggcttc ttctctgtgg cgtgttctct gctcg 55

 <210> 27
 <211> 39
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(39)
 <223> 3' PCR primer

 <400> 27
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 <210> 28
 <211> 39
 <212> DNA
 <213> Artificial sequence

 <220>
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 <222> (1)..(39)
 <223> 5' PCR primer

 <400> 28
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 <210> 29
 <211> 35
 <212> DNA
 <213> Artificial sequence

 <220>
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 <222> (1)..(35)
 <223> 3' PCR primer

 <400> 29
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 <210> 30
 <211> 39
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(39)
 <223> 5' PCR primer

 <400> 30
 gactggatcc gccaccatgc actcgtggg cttcttctc 39

 <210> 31

<211> 34
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(34)
 <223> 3' PCR primer

 <400> 31
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 <210> 32
 <211> 39
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(39)
 <223> 5' PCR primer

 <400> 32
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 <210> 33
 <211> 37
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(37)
 <223> 3' PCR primer

 <400> 33
 gactgggtacc tcattactgt ggactttctg tacattc 37

 <210> 34
 <211> 38
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(38)
 <223> 5' PCR primer

 <400> 34
 gcagcaggat ccacagaaga gactataaaa ttgtctgc 38

 <210> 35
 <211> 37
 <212> DNA
 <213> Artificial sequence

 <220>
 <221> primer_bind
 <222> (1)..(37)
 <223> 3' PCR primer

<400> 35

cgtcgttcta gatcacagtt tagacatgca tcggcag

37

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